# What is...

**E.M.F.** - is Electromotive force which, is a pressure which pumps electrons.

**Rotor** - Part of motor or generator which rotates.

**Stator** - Part of motor or generator which is stationary.

**Armature in motor** is the winding motor which carries alternating current.

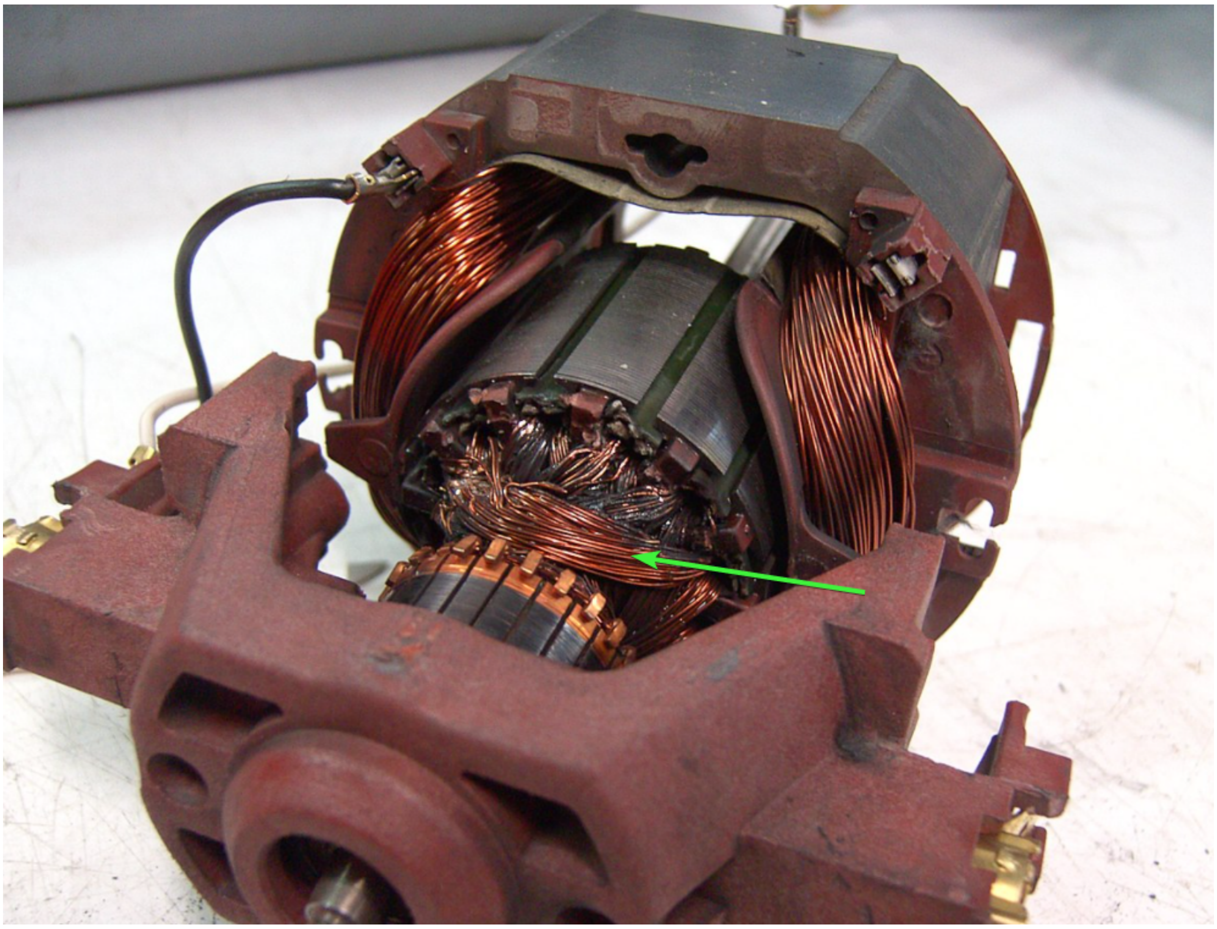
**Armature in Generator** is the winding where alternating E.M.F. is induced.

# Note

Armature winding can be constructed either in stator or rotor.

*For Example*

- Here is a DC motor with armature winding in rotor and field winding in stator.



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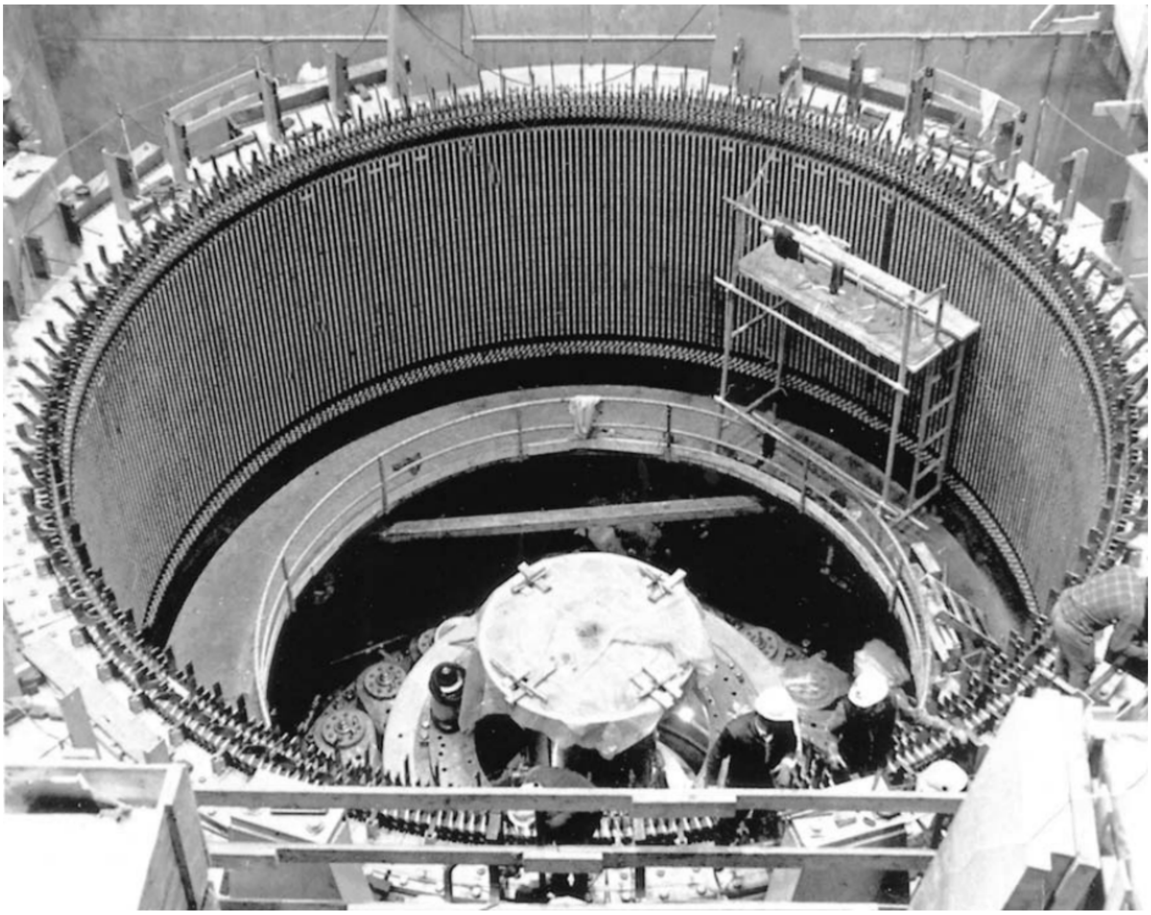
- But here is Alternator(AC generator) where stator contains armature windings



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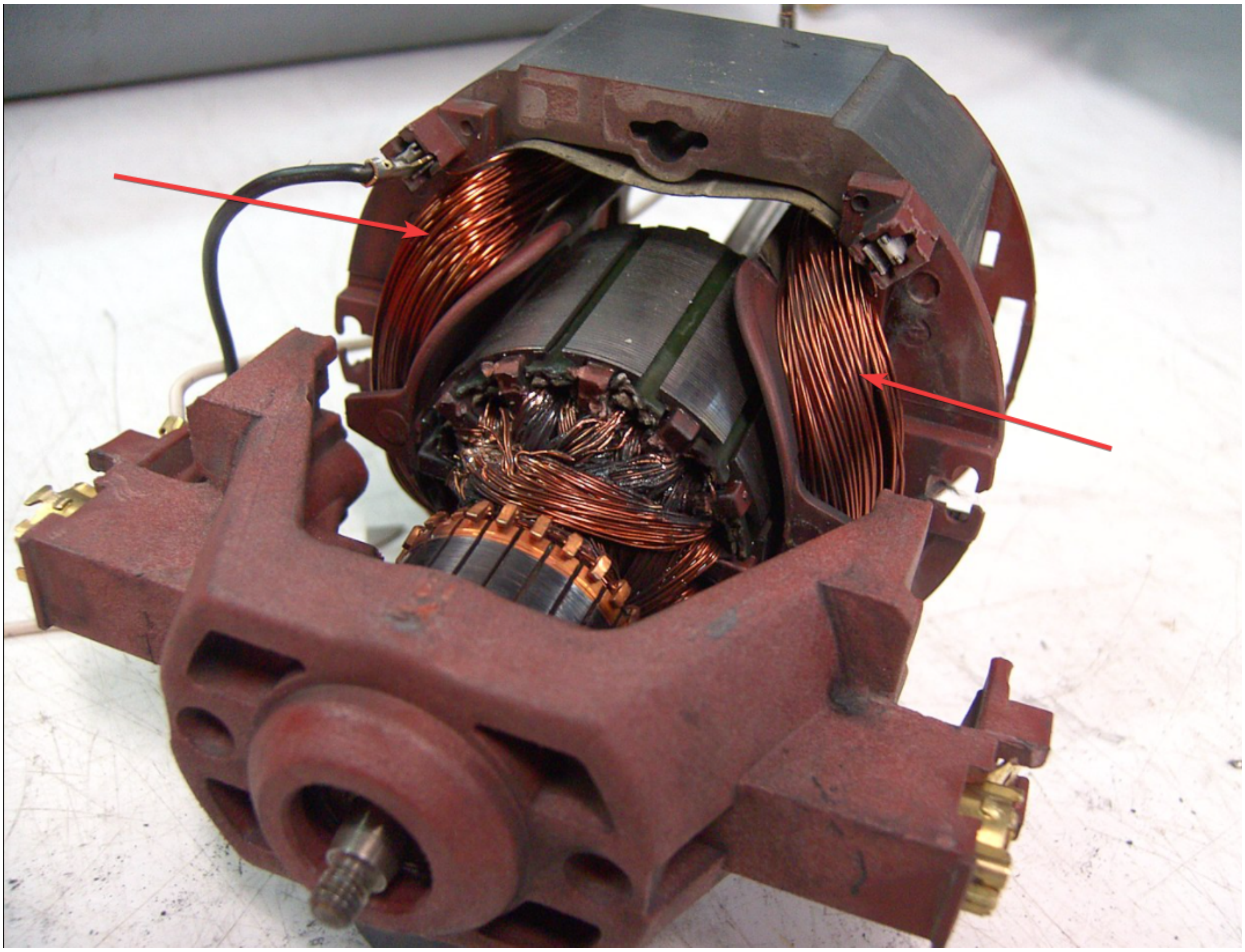
**Field winding or coil** It is a an electromagnet(coil wound on iron) used to generate magnetic field. It can be wound on stator or rotor depending on machine.

*For Example -*

- In DC generators or motors field winding will be in stator.



- In case of Big Alternators(AC generators), Field winding will be in rotor.

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### Rating of alternator

The rating of all the power apparatus depends upon the power which they can handle safely and efficiently under some specific conditions.

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### What is leakage reactance?

Due to leakage flux from slots, Airgap leakage flux, end connection leakage flux etc. armature winding will have some inductance L in each phase which offers leakage reactance $X_L = 2\pi f L$

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### What is armature reaction reactance?

Armature reaction in synchronous machine produces same effect as reactance connected in series with winding, this is is called armature reaction reactance.

### What is doubly fed?

When an machine is given 2 supply it is doubly fed. For eg. In Synchronous motor: Field winding is given DC supply and armature winding is given 3$\phi$ AC supply.